

CLAIMS

1. A system for supporting a pipe string (2) comprising at least one pipe element, to which pipe string (2) an additional pipe element has to be connected, where the pipe string may, for example, be a casing in a well,
5 comprising a lifting device (1), a wedge device (3) and an abutment element (4),
characterised in that the lifting device (1) comprises an attachment foundation (10), a lifting arm (11) with an inner and an outer arm portion (12 and 13 respectively), which inner arm portion (12) is in linked
10 connection with the attachment foundation (10) and a replaceable tension element (14) in the form of a circular arc connected to the outer arm portion (13), where the wedge device (3) is releasably secured to the tension element (14), thus enabling the wedge device (3) to be moved by means of the lifting device (1) from an inoperative position in a position
15 above the abutment element (4) to an operative position where the wedge device (3) abuts against the abutment element (4), thus securing the pipe string (2) by means of the wedge effect.
2. A system according to claim 1,
characterised in that the outer arm portion (13) is substantially U-shaped,
20 with its open end facing away from the inner arm portion (12).
3. A system according to claim 1,
characterised in that the wedge device (3) comprises a plurality of wedge elements (31) where the wedge elements (31) are connected individually to the tension element (14).
- 25 4. A system according to claim 1,
characterised in that in an active position in abutment against the abutment element (4) the wedge device (3) completely encircles the pipe string (2).
5. A system according to claim 1,
30 characterised in that the tension element (14) is releasably attached to the lifting arm (11).
6. A system according to claim 1,
characterised in that the attachment foundation (10) comprises attachment devices for releasable attachment of the attachment
35 foundation (10) to the abutment element (4) and/or a base.

7. A system according to claim 1,
characterised in that the abutment element (4) is segmented.
8. A lifting device (1) for lifting a wedge device (3) for the purpose of pipe
connection of several pipe elements,
5 characterised in that the lifting device (1) comprises an attachment
foundation (10), a lifting arm (11) and a replaceable tension element (14),
where the lifting arm (11) has an inner arm portion (12) pivotally
connected to the attachment foundation (10) and an outer arm portion
10 (13), and that the tension element (14) is substantially in the form of a
circular arc and is releasably, pivotally connected to the outer arm
portion (13), thus enabling the wedge device (3) to be releasably attached
to the tension element (14) for lifting out of and into an active position.
9. A lifting device according to claim 8,
characterised in that the outer arm portion (13) of the lifting arm (11) is
15 substantially U-shaped.
10. A lifting device according to claim 8,
characterised in that the tension element (14) comprises a ring element in
the form of a circular arc, where the open section of the circular arc is
substantially equal to or slightly smaller than the pipe diameter of the
20 pipe string (2) that has to be supported.
11. A lifting device according to claim 10,
characterised in that the length of the tension element (14) is at least
equal to or longer than the outer circumference of the pipe string (2) that
has to be supported.
- 25 12. A lifting device according to claim 10,
characterised in that stoppers (16) are attached on the tension element's
(14) ends of the circular arc.
13. A lifting device according to claim 8,
characterised in that a bracket (17) is attached to the lifting arm (11) near
30 the bottom of the U-shape and that a central point of the tension
element's (14) circular arc is pivotally connected to the bracket (17).
14. A lifting device according to claim 8,
characterised in that the outer portions of the U-shaped arm portion (13)
are connected to at least two points on the tension element (14) by at
35 least two flexible connecting elements (18).

15. A lifting device according to claim 12,
characterised in that there are two connecting elements (18) and that
these are mounted at opposite sides of the tension element (14).
- 5 16. A lifting device according to claim 12 or 13,
characterised in that the attachment points for the connecting elements
(18) on the lifting arm (11) are spaced at a greater distance apart than the
attachment points for the connecting elements (18) on the tension
element (14).
- 10 17. A method for releasably supporting a pipe string during connection of a
new pipe element to the pipe string,
characterised in that for a lifting device a tension element is chosen
which is adapted to the diameter of the pipe element of the pipe string
that has to be supported, that a wedge device is mounted on the tension
element, that an abutment element is placed round the pipe element, that
15 the lifting device with the wedge device are secured relative to the
abutment element, that the wedge device is lowered to an active position
by the lifting device, thus securing the pipe string.
- 20 18. A method according to claim 15,
characterised in that the wedge device comprises wedge elements which
are inserted onto the tension element.